Title

So You Want
to be a
Computer Scientist

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What is a Computer Scientist

- A computer scientist is a combination of 3 disciplines
  - Science
    - There is a rich scientific basis for computer science
    - We're not just "hacking out programs"
  - Engineering
    - Choosing appropriate tools and mechanisms to accomplish a task
  - Mathematics
    - Algorithms and data structures are an integral part of what we do

What isn't a Computer Scientist

- We don't teach you 20 different languages
  - We'll teach you 1 or 2, you can figure out the rest
- We don't teach you 10 different computers
  - Computer science principles are general
  - We'll sometimes talk about the tradeoffs of different architectures
- We don't teach you computer applications
  - Anybody can figure out Microsoft Excel given a manual
- We don't spend all of our time behind a terminal
  - Working computer scientists spend half of their time talking to people

Computer Science Specialties

- Our graduates tend to end up in some of the following areas:
  - Computer programming
  - System administration
  - Application building
  - Database design/programming
  - Consulting
  - Network programming
  - WWW design/maintenance

Computer Science Industry

- Consulting Firms
  - Good money, lots of experience
- Banks & Insurance Companies
  - Developing and maintaining data bases
- Small Companies
  - Being "everything" to "everyone"
- Large Companies
  - Working with teams of programmers to develop applications

What Do You Need to Enjoy

- To be a good computer scientist, you must enjoy (and be good in)
  - Scientific reasoning
    - Why doesn't this work???
  - Logic
    - Understanding chains of events
  - Mathematics
    - Analyzing real software
    - Understanding complicated structures
  - Social skills
    - **Talking to human beings**

Ohio U Requirements

- At Ohio University, Computer Science Undergraduates take courses in the following outside areas
  - Ohio U "tier" requirements
  - Physics or Chemistry
  - Mathematics
    - Calculus, Diff EQ, Statistics, discrete structures
- Computer Science Classes
  - C++ programming sequence
  - Assembly language
  - Computer organization
  - Computer algorithms
  - Data Structures
  - Programming languages
  - Operating systems

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	20%	Median	80%
Mainframe			
Junior Programmer	32	34	39
Senior Programmer/Analyst	36	43	52
Midrange			
Junior Programmer	28	33	39
Senior Programmer/Analyst	35	42	53
Microcomputer			
Junior Programmer	30	37	43
Senior Programmer/Analyst	38	47	58
Software Engineer			
Junior Programmer	30	35	45
Senior Programmer/Analyst	28	48	60
SPECIALISTS:			
Database Management			
Database Analyst	42	51	59
Database Administrator	40	45	53
LAN Administrator	33	40	50
End User Support			
PC Support Specialist	29	35	45
PC Analyst	32	42	52
System Administrator/Mgr.	35	42	52
Telecommunications			
Voice Analysts	35	44	55
Data Communications Analyst	38	45	57
System Programmer	40	49	58

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	20%	Median	80%
BUSINESS SYSTEMS:			
Systems Analyst	40	49	60
Consultant	40	50	70
EIS Analyst	35	40	50
DATA CENTER:			
Data Center Manager	35	46	59
Computer Operations			
Operator	19	23	26
Senior Operator	22	26	34
Operations Support			
Technician	25	32	39
Senior Technician	28	35	45
Communications/Network			
Operator	25	34	40
Senior Operator	30	40	52